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 *              W E L C O M E   T O   T H E                      *
*         U. S.   P A T E N T   T E X T   F I L E                *
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=> s (parathyroid hormone)/ti
            31 PARATHYROID/TI
           313 HORMONE/TI
L1          24 (PARATHYROID HORMONE)/TI
               ((PARATHYROID(W)HORMONE)/TI)

=> s l1 and fy>1986

        725713 FY>1986
L2          19 L1 AND FY>1986

=> s l1 not l2
L3           5 L1 NOT L2

=> d 1-5

1.  4,508,828, Apr. 2, 1985, Bioassay of **parathyroid**
**hormone**; Arnold W. Lindall, et al., 436/500; 422/61; 436/503,
504, 804, 808, 817, 824, 825 [IMAGE AVAILABLE]

2.  4,409,141, Oct. 11, 1983, Peptides for assaying human
**parathyroid** **hormone**; Toshiharu Noda, et al., 530/324;
435/7.9; 530/806; 930/10, DIG.787, DIG.821 [IMAGE AVAILABLE]

3.  4,105,602, Aug. 8, 1978, Synthesis of peptides with
**parathyroid** **hormone** activity; Robert L. Colescott, et
al., 524/577; 260/1; 530/324, 327, 328, 330, 331, 334; 930/10,
21, 280, DIG.821, DIG.822 [IMAGE AVAILABLE]

4.  4,086,196, Apr. 25, 1978, **Parathyroid** **hormone**;
Geoffrey William Tregear, 530/324; 525/54.11; 530/334; 930/10,
DIG.821 [IMAGE AVAILABLE]

5.  3,886,132, May 27, 1975, Human **parathyroid** **hormone**;
Hollis Bryan Brewer, et al., 530/324, 399; 930/10, DIG.821 [IMAGE
AVAILABLE]
=> d ti ab date in ccls 3-5

US PAT NO:      4,105,602 [IMAGE AVAILABLE]            L3: 3 of 5
TITLE:          Synthesis of peptides with **parathyroid**
**hormone**                    activity

ABSTRACT:
Resin peptides useful in the preparation of peptides having
biological activity, and particularly such resin peptides
containing R--CH.sub.2 --O--Phe--Asn at one end of an amino acid
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chain, R being the resin and Phe and Asn being the residues of the amino acids phenylalanine and asparagine; and processes for the preparation of such resin peptides. Resin peptides are disclosed which contain amino acid chains identical with the amino acid chains of natural peptides having biological activity. Other resin peptides are disclosed which contain amino acid chains in which the amino acid residues differ in kind and sequence from amino acid chains of natural biologically active peptides but from which peptides having biological acitivity may be derived.

TITLE: Synthesis of peptides with **parathyroid** **hormone** activity
US PAT NO: 4,105,602 DATE ISSUED: Aug. 8, 1978 [IMAGE AVAILABLE]
APPL-NO: 05/548,718 DATE FILED: Feb. 10, 1975 INVENTOR: Robert L. Colescott, Bourbonnais, IL
Geoffrey W. Tregear, Hawthorne, Australia
US-CL-CURRENT: 524/577; 260/1; 530/324, 327, 328, 330, 331, 334; 930/10, 21, 280, DIG.821, DIG.822

US PAT NO: 4,086,196 [IMAGE AVAILABLE] L3: 4 of 5
TITLE: **Parathyroid** **hormone**

ABSTRACT:
A peptide chosen from the group comprising [Ala.sup.1]-HPTH-(1-X) and HPTH-(1-X) wherein X is an integer from 27 to 34.

TITLE: **Parathyroid** **hormone**
US PAT NO: 4,086,196 DATE ISSUED: Apr. 25, 1978 [IMAGE AVAILABLE]
APPL-NO: 05/563,173 DATE FILED: Mar. 28, 1975 INVENTOR: Geoffrey William Tregear, Hawthorn, Australia
US-CL-CURRENT: 530/324; 525/54.11; 530/334; 930/10, DIG.821
US PAT NO: 3,886,132 [IMAGE AVAILABLE] L3: 5 of 5
TITLE: Human **parathyroid** **hormone**

ABSTRACT:
Human parathyroid hormone was isolated in highly purified form from human parathyroid adenomas. The primary sequence of the amino terminal 34 residues was determined and the peptide of the first 34 residues synthesized.

TITLE: Human **parathyroid** **hormone**
US PAT NO: 3,886,132 DATE ISSUED: May 27, 1975 [IMAGE AVAILABLE]
APPL-NO: 05/423,303 DATE FILED: Dec. 10, 1973 REL-US-DATA: Continuation-in-part of Ser. No. 317,702, Dec. 21, 1972, abandoned.
INVENTOR: Hollis Bryan Brewer, Potomac, MD
Claude D. Arnaud, Rochester, MN
US-CL-CURRENT: 530/324, 399; 930/10, DIG.821

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=> s ((parathyroid hormone)/ab not l1)
             36 PARATHYROID/AB
            869 HORMONE/AB
             29 (PARATHYROID HORMONE)/AB
                  ((PARATHYROID(W)HORMONE)/AB)
L4           11 ((PARATHYROID HORMONE)/AB NOT L1)

=> d 1-11
```

1. 5,438,040, Aug. 1, 1995, Conjugation-stabilized polypeptide compositions, therapeutic delivery and diagnostic formulations comprising same, and method of making and using the same; Nnochiri N. Ekwuribe, 514/3, 4, 12, 21; 530/303, 402, 409, 410, 411 [IMAGE AVAILABLE]

2. 5,359,030, Oct. 25, 1994, Conjugation-stabilized polypeptide compositions, therapeutic delivery and diagnostic formulations comprising same, and method of making and using the same; Nnochiri N. Ekwuribe, 530/303; 424/85.1, 85.4, 94.3; 435/188; 530/307, 309, 322, 345, 351, 402, 409, 410, 411 [IMAGE AVAILABLE]

3. 5,093,233, Mar. 3, 1992, Antagonists with position 13 modification; Michael Rosenblatt, et al., 435/7.21, 4, 7.2, 7.23; 514/12; 530/324, 325; 930/DIG.820, DIG.822 [IMAGE AVAILABLE]

4. 4,833,125, May 23, 1989, Method of increasing bone mass; Robert M. Neer, et al., 514/12; 930/10 [IMAGE AVAILABLE]

5. 4,788,178, Nov. 29, 1988, Use of gonadoliberin and gonadoliberin agonists for the treatment of climacteric complaints; Wolfgang Konig, 514/15; 930/20, 21, 130, DIG.690 [IMAGE AVAILABLE]

6. 4,698,328, Oct. 6, 1987, Method of increasing bone mass; Robert M. Neer, et al., 514/12; 930/10 [IMAGE AVAILABLE]

7. 4,692,433, Sep. 8, 1987, Method and composition for regulating serum calcium levels of mammals; Karl Y. Hostetler, et al., 514/12; 424/450; 514/159, 808 [IMAGE AVAILABLE]

8. 4,621,053, Nov. 4, 1986, Process for the production of human peptide hormones; Kaname Sugimoto, 435/70.2, 172.2, 240.26, 284, 948; 530/399; 935/106, 109 [IMAGE AVAILABLE]

9. 4,423,037, Dec. 27, 1983, Inhibitors of peptide hormone action; Michael Rosenblatt, et al., 514/12; 530/324, 334; 930/10, 20, 21, DIG.821 [IMAGE AVAILABLE]

10. 4,369,138, Jan. 18, 1983, Parathyroid radioimmunoassay; Arnold W. Lindall, 530/326; 436/540, 545; 530/324, 854; 930/10 [IMAGE AVAILABLE]

11. 4,341,755, Jul. 27, 1982, Parathyroid radioimmunoassay; Arnold W. Lindall, 424/1.45; 436/500 [IMAGE AVAILABLE]

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=> d ab 8
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US PAT NO: 4,621,053 [IMAGE AVAILABLE] L4: 8 of 11

ABSTRACT:
Human peptide hormones, such as insulin, growth hormone, prolactin, adrenocorticotropic hormone, placental lactogen, calcitonin, **parathyroid** **hormone** and thyroid stimulating hormone, are produced by implanting a human.times.human hybridoma lymphoblastoid cell line capable of producing the human peptide hormone in a non-human warm-blooded animal. After a period of time, the resultant tumor is extracted and disaggregated and then cultured in vitro under conditions appropriate to accumulate the human peptide hormone. The human.times.human hybridoma lymphoblastoid cell line is preferably formed by fusing parent human cells inherently capable of producing the human peptide hormone with a human lymphoblastoid line, preferably of leukemic origin. This process permits a substantial increase in the amount of human peptide hormone which can be produced.

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=> d his

     (FILE 'USPAT' ENTERED AT 16:50:38 ON 30 AUG 95)
L1            24 S (PARATHYROID HORMONE)/TI
L2            19 S L1 AND FY>1986
L3             5 S L1 NOT L2
L4            11 S ((PARATHYROID HORMONE)/AB NOT L1)

=> s l1 and fy=1987
         89190 FY=1987
L5            1 L1 AND FY=1987

=> d

1.  4,771,124, Sep. 13, 1988, **Parathyroid** **hormone**
antagonists with simplified synthetic methodology; Michael
Rosenblatt, et al., 530/324; 930/10, 20, 21 [IMAGE AVAILABLE]

=> s ;1 and fy=1988
ENTER LOGIC EXPRESSION, QUERY NAME, OR (END):
ENTER LOGIC EXPRESSION, QUERY NAME, OR (END):-b
L6       952270 -B
=> s l1 and fy=1988
         98178 FY=1988
L7            1 L1 AND FY=1988

=> d

1.  5,217,896, Jun. 8, 1993, Monoclonal antibodies recognizing
**parathyroid** **hormone**-like protein; Steven P. Kramer, et
al., 435/240.27, 70.21, 172.2; 530/388.24, 391.1, 391.3 [IMAGE
AVAILABLE]
=> s l1 and fy=1989
        104232 FY=1989
```

L8 7 L1 AND FY=1989

=> d 1-7 ti,ab,date,in

US PAT NO: 5,171,670 [IMAGE AVAILABLE] L8: 1 of 7
TITLE: Recombinant DNA method for production of **parathyroid** **hormone**

ABSTRACT:
A recombinant DNA molecule coding for human parathyroid hormone operably linked to an inducible bacterial promoter, a leader growth hormone sequence, and a selective enzymatic cleavage site, expression of the molecule in bacteria, and methods for producing large quantities of human parathyroid hormone and its variants.

TITLE: Recombinant DNA method for production of **parathyroid** **hormone**
US PAT NO: 5,171,670 DATE ISSUED: Dec. 15, 1992 [IMAGE AVAILABLE]
APPL-NO: 07/350,979 DATE FILED: **May 12, 1989** INVENTOR: Henry M. Kronenberg, Belmont, MA
Samuel R. Nussbaum, Weston, MA
Tomoko Doi, Osaka, Japan

US PAT NO: 5,028,439 [IMAGE AVAILABLE] L8: 2 of 7
TITLE: Inhibition of **parathyroid** **hormone** secretion
ABSTRACT:
Parathyroid Hormone, when excessively synthesized, induces pathologic bone resorption and demineralization and results in hypocalcemia which produces toxic effects in soft tissues. Non-toxic water-soluble pharmaceutically acceptable compound derivative of peroxydiphosphoric acid, administered orally or systemically, inhibits parathyroid hormone induced bone resorption in vitro and in vivo in warm blooded animals.
TITLE: Inhibition of **parathyroid** **hormone** secretion US PAT NO: 5,028,439 DATE ISSUED: Jul. 2, 1991 [IMAGE AVAILABLE]
APPL-NO: 07/296,390 DATE FILED: **Jan. 9, 1989** REL-US-DATA: Continuation of Ser. No. 851,914, Apr. 14, 1986, abandoned, which is a continuation-in-part of Ser. No. 768,394, Aug. 22, 1985, abandoned.
INVENTOR: Abdul Gaffar, Somerset, NJ

US PAT NO: 5,010,010 [IMAGE AVAILABLE] L8: 3 of 7
TITLE: Production of human **parathyroid** **hormone** from microorganisms

ABSTRACT:
The invention provides recombinant plasmids containing in DNA sequences coding for human preproparathyroid hormone. The invention further provides microorganisms, for example E. coli, transformed by these plasmids. Finally, the invention also provides a plasmid for insertion into yeast and a transformed

yeast in which the plasmid contains DNA coding for parathyroid hormone. Parathyroid hormone is then secreted by the transformed yeast.

TITLE: Production of human **parathyroid** **hormone** from microorganisms
US PAT NO: 5,010,010 DATE ISSUED: Apr. 23, 1991 [IMAGE AVAILABLE]
APPL-NO: 07/393,851 DATE FILED: **Aug. 14, 1989** REL-US-DATA: Continuation of Ser. No. 921,684, Oct. 22, 1986, abandoned.
INVENTOR: Kaare M. Gautvik, Oslo, Norway
Peter Alestrom, Sollihogda, Norway
Tordis B. Oven, Oslo, Norway
Odd S. Gabrielsen, Oslo, Norway

US PAT NO: 5,001,223 [IMAGE AVAILABLE] L8: 4 of 7
TITLE: **Parathyroid** **hormone** antagonists with enhanced metabolic properties

ABSTRACT:
The present invention relates to the use of peptide hormone analogues as inhibitors of their respective naturally occurring peptide hormone. The structure of the peptide hormone analogues is exemplified by parathyroid hormone wherein Phe.sup.7 is substituted by NMePhe, D-Phe, desamino Phe, or Met.sup.8 is substituted by NMeMet.

TITLE: **Parathyroid** **hormone** antagonists with enhanced metabolic properties
US PAT NO: 5,001,223 DATE ISSUED: Mar. 19, 1991 [IMAGE AVAILABLE]
APPL-NO: 07/318,475 DATE FILED: **Mar. 2, 1989** REL-US-DATA: Continuation of Ser. No. 54,360, May 26, 1987, abandoned. INVENTOR: Michael Rosenblatt, Ardmore, PA
Lynn H. Caporale, Lansdale, PA
Michael Chorev, Jerusalem, Israel

US PAT NO: 4,968,669 [IMAGE AVAILABLE] L8: 5 of 7
TITLE: **Parathyroid** **hormone** antagonists

ABSTRACT:
The present invention relates to the use of peptide hormone analogues as inhibitors of their respective naturally occurring peptide hormone. The structure of the peptide hormone analogues is exemplified by parathyroid hormone wherein Gly.sup.12 is substituted by D-Trp, L-Trp, L- or D- alpha- or beta-naphthylalanine, or D- or L- alpha-MeTrp.

TITLE: **Parathyroid** **hormone** antagonists
US PAT NO: 4,968,669 DATE ISSUED: Nov. 6, 1990 [IMAGE AVAILABLE]
APPL-NO: 07/341,597 DATE FILED: **Apr. 21, 1989** REL-US-DATA: Continuation-in-part of Ser. No. 191,512,

May 9, 1988. INVENTOR: Michael Rosenblatt, Ardmore, PA
Michael Chorev, Jerusalem, Israel

US PAT NO: 4,948,789 [IMAGE AVAILABLE] L8: 6 of 7
TITLE: Suppression of **parathyroid** **hormone** synthesis and secretion

ABSTRACT:
Vitamin D.sub.3 derivatives of formula (I): ##STR1## wherein R.sub.1, R.sub.2 and R.sub.3, which may be the same or different, each represent a hydrogen atom or a hydroxyl group; R.sub.4 is hydrogen or a C.sub.4-6 alkyl group that is optionally substituted by a hydroxyl group; preferably 22-oxa-1,25-(OJ).sub.2 D.sub.3, or OCT, are administered to treat hyperparathyroidism, particularly secondary hyperparathyroidism, without inducing hypercalcemia. The derivatives may be administered orally or parenterally. They are preferably administered intravenously in the course of renal dialysis.

TITLE: Suppression of **parathyroid** **hormone** synthesis and secretion
US PAT NO: 4,948,789 DATE ISSUED: Aug. 14, 1990 [IMAGE AVAILABLE]
APPL-NO: 07/329,606 DATE FILED: **Mar. 28, 1989** INVENTOR: Eduardo Slatopolsky, St. Louis, MO

US PAT NO: RE 33,188 [IMAGE AVAILABLE] L8: 7 of 7
TITLE: Peptides for assaying human **parathyroid** **hormone**
ABSTRACT:
A peptide of the formula

R--Lys--Lys--Glu--Asp--Asn--Val--Leu--Val--Glu--Ser--His--Glu--Lys--Ser--
Leu--Gly--Glu--Ala--Asp--Lys--Ala--Asp--Val--Asp--Val--Leu--Thr--Lys--Ala- -Lys--Ser--Gln--OH
wherein R is H, H--Tyr-- or R.sub.1 --Pro--Arg--, R.sub.1 is H, H--Tyr-- or R.sub.2 --Ala--Gly--Ser--Gln--Arg--, and R.sub.2 is H, H--Cys-- or H--Tyr--, or a salt thereof, is useful for assaying human parathyroid hormone (h-PTH).

TITLE: Peptides for assaying human **parathyroid** **hormone** US PAT NO: RE 33,188 DATE ISSUED: Mar. 27, 1990 [IMAGE AVAILABLE]
APPL-NO: 07/332,801 DATE FILED: **Apr. 3, 1989** FRN-PR. NO: 55-187686 FRN FILED: Dec. 29, 1980 FRN-PR. CO: Japan
FRN-PR. NO: 56-057691 FRN FILED: Apr. 16, 1981 FRN-PR. CO: Japan
FRN-PR. NO: 56-152377 FRN FILED: Sep. 25, 1981 FRN-PR. CO: Japan
REISSUE OF:
US PAT NO: 4,409,141

DATE ISSUED: Oct. 11, 1983
APPL-NO: 335,401
DATE FILED: Dec. 29, 1981
INVENTOR: Toshiharu Noda, Shizuoka, Japan
Kaoru Morita, Shizuoka, Japan
Sadami Kobari, Mishima, Japan
Nobuaki Nakagawa, Shizuoka, Japan
Susumu Watanabe, Shizuoka, Japan
Shigeo Katsuragi, Shizuoka, Japan
Kunio Ohyama, Shizuoka, Japan
Masahiko Taniuchi, Mishima, Japan

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